

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. 2000-SW-46-AD; Amendment 39-12674; AD 2002-05-06]**

**RIN 2120-AA64**

### **Airworthiness Directives; Sikorsky Aircraft Corporation Model S-76A Helicopters**

**AGENCY:** Federal Aviation Administration, DOT.

**ACTION:** Final rule.

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**SUMMARY:** This amendment supersedes an existing airworthiness directive (AD) for Sikorsky Aircraft Corporation Model S-76A helicopters that currently requires a service life limit on certain landing gear parts based on hours time-in-service (TIS). This amendment adds another method of calculating the life limit for certain landing gear parts based on cycles and requires the operator to choose and record the method of calculating the service life of each part in the rotorcraft history or equivalent record. This amendment also requires replacing the part based upon either the maximum hours TIS or the maximum cycles but not both. This amendment is prompted by the need to add flight cycles as a method of calculating the life limit for certain landing gear parts based on fatigue analyses. The actions specified by this AD are intended to add or revise the retirement life for certain landing gear parts to prevent fatigue failure of the landing gear and subsequent loss of control of the helicopter.

**DATES:** Effective April 22, 2002.

**FOR FURTHER INFORMATION CONTACT:** Richard Noll, Aviation Safety Engineer, Boston Aircraft Certification Office, 12 New England Executive Park, Burlington, MA 01803, telephone (781) 238-7160, fax (781) 238-7199.

**SUPPLEMENTARY INFORMATION:** A proposal to amend 14 CFR part 39 by superseding AD 86-09-11, Amendment 39-5298 (51 FR 17009, May 8, 1986), for Sikorsky Model S76A helicopters, was published in the Federal Register on October 12, 2001 (66 FR 52073). That action proposed retaining a life limit based on hours TIS but also allowing the life limit to be based on cycles for certain landing gear parts. That action also proposed selecting a method for calculating the life limit of the landing gear parts, recording that method in the rotorcraft history or equivalent records, and using only that method throughout the life of the part. A cycle is defined as one takeoff to a hover or other mode of flight and one landing.

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comment received.

The manufacturer suggests removing all references to specific dates and pages in the maintenance manual because those references could change in future revisions and lead to confusion for the operators. The FAA agrees; however, that information was only included in the NPRM as part of the discussion and was not included in the regulatory text and is not included in the final rule.

That commenter also states that in Table 1 the correct part number for the main landing gear axle is 1945E85 and not 195E85, and the life limit for the main landing gear retraction actuator piston is 33,000 and not 33,300 hours TIS. The FAA agrees and has corrected this AD accordingly.

After careful review of the available data, including the comment noted above, the FAA has determined that air safety and the public interest require the adoption of the rule with the changes described previously. The FAA has determined that these changes are minor corrections and will only minimally increase the economic burden on operators and will not increase the scope of the AD.

The FAA estimates that 87 helicopters of U.S. registry will be affected by this AD, that it will take approximately 2 work hours per helicopter to accomplish the required actions, and that the average labor rate is \$60 per work hour. Based on these figures, the total cost impact of the AD on U.S. operators is estimated to be \$10,440.

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption ADDRESSES.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Safety.

## **Adoption of the Amendment**

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

## **PART 39--AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

### **Sec. 39.13 [Amended]**

2. Section 39.13 is amended by removing Amendment 39-5298 (51 FR 17009, May 8, 1986), and by adding a new airworthiness directive (AD), to read as follows:

# AIRWORTHINESS DIRECTIVE



Aircraft Certification Service  
Washington, DC

U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

*We post ADs on the internet at "av-info.faa.gov"*

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

**CORRECTION** - *The effective date in paragraph (g) of this AD is incorrect in the Federal Register and on the Government Printing Office (GPO) website. The FAA has requested a correction be made to both the Federal Register and GPO website. We have made the appropriate correction in this mailing.*

**2002-05-06 Sikorsky Aircraft Corporation:** Amendment 39-12674, Docket No. 2000-SW-46-AD. Supersedes AD 86-09-11, Amendment 39-5298, Docket No. 86-ASW-12.

**Applicability:** Model S-76A helicopters, certificated in any category.

**Note 1:** This AD applies to each helicopter identified in the preceding applicability provision, regardless of whether it has been otherwise modified, altered, or repaired in the area subject to the requirements of this AD. For helicopters that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

**Compliance:** Required as indicated, unless accomplished previously.

To prevent fatigue failures of the main and nose landing gear parts and subsequent loss of control of the helicopter, accomplish the following:

(a) Within 50 hours time-in-service (TIS), determine either the hours TIS or cycles accumulated on each part listed in Table 1 or Table 2 of this AD, as applicable. A cycle is a takeoff to a hover or other mode of flight and a landing.

(1) If neither the hours TIS nor cycles are known for an affected part, assume the rotorcraft's total hours TIS are the hours TIS for that part.

(2) If only one history is known for the part (either hours TIS or cycles), use that method for tracking the remaining life of that part.

(3) Thereafter, record in the rotorcraft history or equivalent record the selected method of calculating the life limit for each landing gear part, and record either the accumulated hours TIS or cycles for the selected method.

(b) Before further flight, remove from service each part listed in the following Table 1 of this AD on or before reaching the applicable life limit:

**Table 1**

<b>Component</b>	<b>Part No.</b>	<b>Life Limit Hours TIS</b>	<b>Life Limit Cycles</b>
(1) Main Landing Gear:			
(i) Cylinder	1945E2	30,300	136,350
(ii) Axle Support Fitting	1945C12	9,600	43,200
(iii) Pin, Universal to Cylinder	1945C29	23,800	107,100
(iv) Drag Brace Rod End	1945E35	38,200	171,900
(v) Upper Torque Arm	1945E46	37,900	170,550
(vi) Lower Torque Arm	1945C47	16,200	72,900
(vii) Axle	1945E85	23,380	105,210
(viii) Rod End, Positioning Rod	1945E235	19,100	85,950
(ix) Retraction Actuator:			
(A) Outer Cylinder	1945E302, 1945F302	7,100	31,950
(B) Piston	1945E314	33,000	148,500
(C) Piston Rod End	01-747-061	8,000	36,000
(2) Nose Landing Gear:			
(i) Fork	1944E60	42,500	191,250
(ii) Cylinder	1944C2, 1944E2	18,500	83,250
(iii) Drag Brace Actuator:			
(A) Cylinder Terminal	1944D201	28,800	129,600
(B) Piston Rod	1944E204	22,000	99,000

(c) For helicopters modified by Supplemental Type Certificate (STC) SH568NE, before further flight, remove from service each part listed in the following Table 2 of this AD on or before reaching the applicable life limit:

**Table 2**

<b>Component</b>	<b>Part No.</b>	<b>Life Limit Hours TIS</b>	<b>Life Limit Cycles</b>
(1) Main Landing Gear:			
(i) Cylinder	1945E2, 2071-2	24,000	108,000
(ii) Piston	1945E4, 2071-4	28,600	128,700
(iii) Axle Support Fitting	1945C12, 2071-12	7,400	33,300
(iv) Pin, Universal to Cylinder	1945C29, 2071-29	16,000	72,000
(v) Pin, Positioning Rod to Upper Torque Arm.	1945A32, 2071-32	25,000	112,500
(vi) Drag Brace Rod End	1945E35, 2071-35	23,864	107,388
(vii) Upper Torque Arm	1945E46, 2071-46	26,829	120,730
(viii) Lower Torque Arm	1945C47, 2071-47	11,928	53,676
(ix) Lower Drag Brace	1945E74, 2071-74	46,000	207,000
(x) Retraction Brace	1945E76A11, 1945E76A12 2071-76-11, 2071-76-12	41,000	184,500
(xi) Axle	1945E85, 2071-85	23,380	105,210
(xii) Rod End, Positioning Rod	1945E235, 2071-235	13,600	61,200
(xiii) Retraction Actuator:			
(A) Outer Cylinder	1945E302, 1945F302	7,100	31,950
(B) Piston	1945E314	33,000	148,500
(C) Piston Rod End	01-747-061	8,000	36,000

(2) Nose Landing Gear:			
(i) Axle	1944B85, 2070-85	49,833	224,248
(ii) Fork	1944E60, 2070-60	32,000	144,000
(iii) Piston	1944E4, 2070-4	35,878	161,451
(iv) Cylinder	1944C2, 1944E2, 2070-2	13,500	60,750
(v) Drag Brace Actuator:			
(A) Cylinder Terminal	1944D201, 2070-201	23,000	103,500
(B) Piston Terminal	1944E212B, 2070-212	40,000	180,000
(C) Piston Rod	1944E204	22,000	99,000

(d) This AD revises the Limitations section of the maintenance manual by establishing or revising the retirement lives for the affected parts shown in Tables 1 and 2 of this AD and establishing cycle counting as an additional method to determine retirement for the affected parts. Installing STC SH568NE affects the retirement life of certain parts.

(e) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Boston Aircraft Certification Office, FAA. Operators shall submit their requests through an FAA Principal Maintenance Inspector, who may concur or comment and then send it to the Manager, Boston Aircraft Certification Office.

**Note 2:** Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Boston Aircraft Certification Office.

(f) Special flight permits may be issued in accordance with 14 CFR 21.197 and 21.199 to operate the helicopter to a location where the requirements of this AD can be accomplished.

(g) This amendment becomes effective on April 22, 2002.

Issued in Fort Worth, Texas, on March 5, 2002.

Eric Bries,

Acting Manager, Rotorcraft Directorate, Aircraft Certification Service.

[FR Doc. 02-6330 Filed 3-15-02; 8:45 am]

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